FERNO
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KED LIFTING BRIDLE
Model BRB-KED Users' Manual

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Disclaimer

This manual contains general instructions for the use, operation and care of this product. The instructions are not all-inclusive. Safe and proper use of this product is solely at the discretion of the user. Safety information is included as a service to the user. All other safety measures taken by the user should be within and under consideration of applicable regulations. It is recommended that training on the proper use of this product be provided before using this product in an actual situation.

Retain this manual for future reference. Include it with the product in the event of transfer to new users. Additional free copies are available upon request from Customer Service.

Proprietary Notice

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1 - safety information

1.1 Warning

The following warnings appear in this manual.

⚠ WARNING

Untrained operators can cause injury or be injured. Permit only trained personnel to operate the bridle.

Improper use of the bridle can cause injury. Use the bridle only for the purpose described in this manual.

Improper operation can cause injury. Operate the bridle only as described in this manual.

An unrestrained or improperly restrained patient can be injured. Secure the patient in the basket stretcher with a restraint system suitable to the rescue situation.

Modifying the bridle can cause injury and damage. Use the bridle only as manufactured by Ferno.

Improper maintenance can cause injury. Maintain the bridle only as described in this manual.

1.2 Important

Boxes like the one below emphasize important information.

Important

Rescue procedures using the lifting bridle require special skills and are potentially hazardous activities. No rescue personnel should attempt such rescue procedures unless they have received professional instruction and training.

1.3 Bloodborne Disease Notice

To reduce the risk of exposure to bloodborne diseases such as HIV-1 and hepatitis when using the bridle, follow the disinfecting and cleaning instructions in this manual.

1.4 Identification Tag

The lifting bridle has a product tag identifying each unit with date of manufacture, product code and description, a unique serial number and batch number. This tag is located on one of the RED lifting straps.

A sample of the identification tag is illustrated below:

Made in WA by Ferno Australia Pty ltd 22 Casella Place Kewdale WA 6105 Ph (08) 9353 2300 Fax (08) 9353 1169	ITEM No BRB-KED	RATING - 15kN	DATE OF MANUFACTURE: 01/2011
	ITEM Name: Ked Pro Adjustable Lifting Bridle	SERIAL No: 0000001	DATE OF RETIREMENT: 01/2021
		BATCH No - 7756	
	WARNING - EXPERT USE ONLY You must be trained in the use of this lifting bridle. Refer to the instructions provided before use. Check bridle for wear and tear before every use and retire if you find any visible signs of damage		

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2 - OPERATOR SKILLS AND TRAINING

2.1 Skills

Operators using the bridle need:

- a working knowledge of emergency patient-handling procedures.
- the ability to assist the patient.
- a complete understanding of the procedures described in this manual.

2.2 Training

Trainees need to:

- receive instruction and training in rescue procedures using lifting bridles.
- read this manual. For additional free users' manuals, contact Ferno Customer Relations (page 13).
- practice with the bridle before using it in regular service.
- be tested on their understanding of the bridle.
- record their training information. A form is provided on page 14.

⚠ WARNING

Untrained operators can cause injury or be injured. Permit only trained personnel to operate the bridle.

Important

Rescue procedures using the lifting bridle require special skills and are potentially hazardous activities. No rescue personnel should attempt such rescue procedures unless they have received professional instruction and training.

3 - ABOUT THE BRIDLE

3.1 Model BRB-KED Lifting Bridle Description

The Model BRB-KED Adjustable Lifting Bridle (referred to as the bridle throughout this manual) is designed to be used as an interface between a Kendrick Extrication Device and a rope hoist, cable, or other lifting device.

The unit consists of three adjustable attachment webbing straps (legs) consisting of two red straps for connection to lower carry handles of the KED Pro and one blue strap for attachment to the top central carry handle of the KED Pro. Each strap is labelled to depict the appropriate placement of that strap.

The bridle is compatible with Ferno's Model 125-2 Kendric Extrication Devices.

⚠ WARNING

Improper use of the bridle can cause injury. Use the bridle only for the purpose described in this manual.

LOAD LIMIT

The KED® Lifting Bridle is rated for a one-person lift for vertical and confined-space rescue. Specialised training is required.

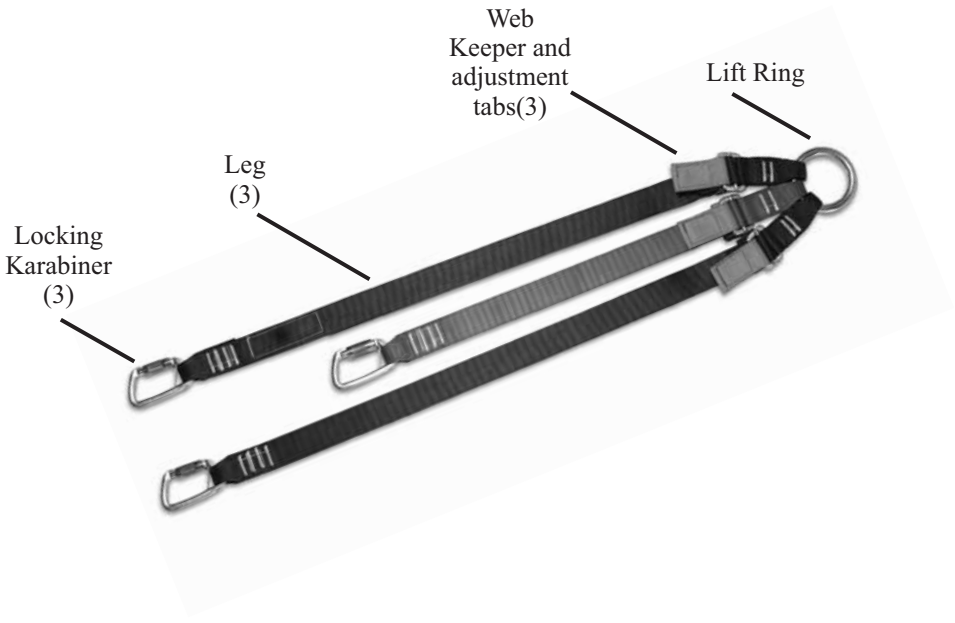
3.2 General Specifications

Product Code	BRB-KED
Rating	22kN
Webbing Width	Polyester rated at 40kN 44mm (1.73 inches)
Adjustment Buckles	Steel
Lifting 'O' Ring	Steel 100mm (3.94 inches)
Karabiners	Steel, 50kN Triple action lock (auto lock)
Red Straps - Leg length (top of lifting 'O' ring to end of Karabiner)	118cm (46.46 inches)
Blue Strap - Leg Length (top of lifting 'O' ring to end of Karabiner)	85cm (33.47 inches)
Weight	1.55kg (3.42lbs)

General specifications are rounded to the nearest whole number. Metric conversions are calculated before rounding the English measurements. For more information, contact Ferno Customer Relations (page 13) or your Ferno distributor.

Ferno reserves the right to change specifications without notice.

3.3 Bridle Components



USERS' MANUAL

For additional free Users' Manuals, please call Ferno Customer Service in Australia on 1800 804 647 or Customer Relations internationally on 1.800.733.3766 or 1.937-382-1451, or contact your Ferno distributor.

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4 - BRIDLE FEATURES

4.1 Color-Coded Webbing

The bridle consists of three Adjustable Attachment webbing straps (or legs) consisting of the following:

- Two (2) red adjustable attachment straps for connection to the lower carry handles of the KED Pro. A label on each strap depicts where the strap should be attached.
- One (1) blue adjustable attachment strap that is a little shorter than the two red straps. The blue strap should be attached to the upper carry handle of the KED. The label on the blue strap also depicts this.

Refer to Figure 1.

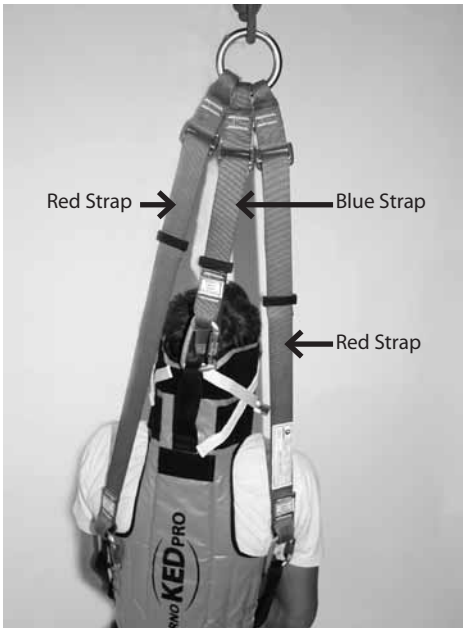

Figure 1 - Placement of Color-Coded Straps

4.2 Bridle Length Adjustment

Prior to using the lifting bridle, ensure all lifting straps are at their maximum extension.

LENGTHENING BRIDLE STRAPS

To return a leg of the bridle to its full length, grasp the orange webbing tab and lift it away from the strap in an upward direction to release the lifting tail end webbing. With your other hand, grasp lifting tail webbing and pull on it to lengthen strap (Figure 2).

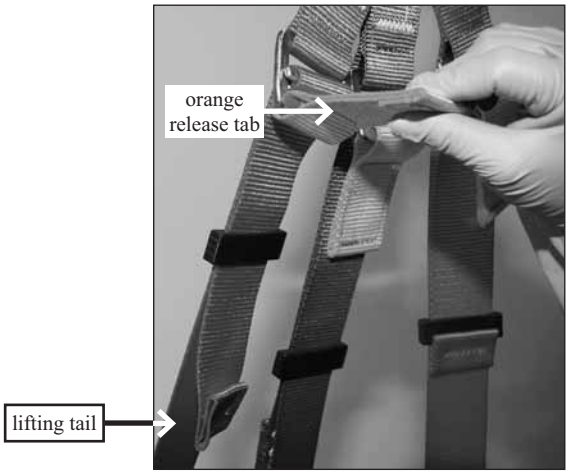

Figure 2 - Lengthening bridle

SHORTENING THE STRAP

To shorten a leg of the bridle, move the plastic web keeper as close to the adjustment buckle as possible.

Firmly grasp 'short' web tail and pull in a downward direction. The lifting tail webbing in turn will cinch up and shorten (Figure 3).

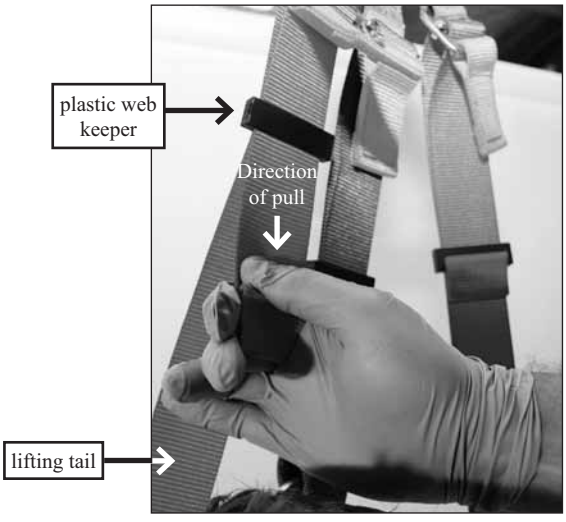

Figure 3 -Shortening the strap

Important

Do **not** attach straps of the same color to the same side of the KED. Doing so will cause the KED to tilt to one side when the straps are shortened or lengthened.

4.3 Karabiners

Each bridle leg terminates with a locking karabiner (Figure 4).

To operate the karabiner:

1. Holding the karabiner firmly in your hand, push the gate barrel of the karabiner away (downward) from the strap end of the karabiner (Figure 5)
2. While pushing the karabiner barrel downward, twist the gate barrel anti-clockwise (Figure 6)
3. Once the gate barrel has been twisted open, push gate barrel towards the spine of the karabiner. Keeping the gate depressed, remove or inset karabiner into KED Pro lifting handle (Figure 7).
4. When this operation is complete, release the karabiner gate and the unit will automatically close and lock (Figure 8).

Note: *Normally, a karabiner is oriented with the gate toward the inside of the KED to prevent the gate being opened by rubbing against a cliff face, building, rock or other element encountered during a rescue.*

However, certain situations may dictate the opposite orientation. It is the responsibility of the user to know which orientation is best suited to a given situation.

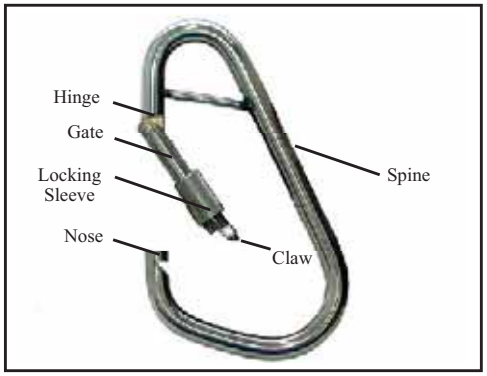

Figure 4 - Karabiner Components

Figure 5 - Push gate barrel away (downward) from strap end of karabiner

Figure 6 - While pushing gate barrel downward, twist barrel anti-clockwise

Figure 7 - Push gate barrel towards spine, then remove or insert karabiner to lifting handle

Figure 8 - On release of karabiner gate, the unit automatically closes and locks

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5 - USING THE BRIDLE

5.1 Before Placing the Bridle in Service

- Personnel who will work with the bridle need to read this manual.
- Confirm that the bridle operates properly by operating it according to instructions in *Bridle Features, pages 7 and 8, and Inspecting the Bridle, page 12.*

⚠ WARNING

Improper operation can cause injury. Operate the bridle only as described in this manual.

5.2 General Guidelines for Use

- Rescue procedures using the lifting bridle require special skills and are potentially hazardous activities. No rescue personnel should attempt such rescue procedures unless they have received professional instruction and training.
- Because rescue situations are rarely the same, this manual must be general in nature. It is the responsibility of personnel specially trained in high angle rescue to know the techniques involved and to select the equipment appropriate for each rescue situation.
- Make sure all equipment used with the bridle has a load rating at least equivalent to that of the bridle.

⚠ WARNING

An unrestrained or improperly restrained patient can be injured. Secure the patient in the KED with a restraint system suitable to the rescue situation. Refer to the KED User Manual.

⚠ WARNING

Modifying the bridle can cause injury and damage. Use the bridle only as manufactured by Ferno.

Important

Rescue procedures using lifting bridles and other specialized gear are considered technical in nature. They are potentially hazardous activities and require special skills. No rescue personnel should attempt technical rescue procedures unless they have received professional instruction and training.

Important

Personnel using the bridle in a high angle rescue situation are responsible for knowing the techniques involved and for selecting the appropriate equipment best suited to the rescue situation.

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5.3 Attaching the Lifting Bridle

Read the *General Guidelines for Use,* page 9, before using the bridle.

Prior to placing the lifting bridle on to the KED, ensure that all the lifting straps are at maximum length by following the lengthening procedure (Section 4.2).

BLUE CENTRAL LIFTING STRAP/LEG

Open karabiner as described in Section 4.3 and attach the blue central strap to top central carry handle of the KED Pro (Figure 10.). The blue lifting strap is marked with a label: 'Attach to Upper Carry Handle).

RED LOWER LIFTING STRAPS

Open karabiner and attach right hand side red lifting strap to the lower right hand side carry handle, and left hand side red lifting strap to the lower left hand side carry handle as shown (Figure 11).

Figure 10 - Attach blue central strap to top central carry handle of KED Pro

Figure 11 - Attach red lifting straps to lower carry handles of KED Pro

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5.4 Final Checks Prior to Lifting

1. Ensure the patient is securely placed and fitted in to the KED Pro (refer to the KED Pro user manual). It is important to ensure that the leg straps and chest straps on the KED Pro are securely fastened and in posistion prior to attempting any lifting operations.
2. Once the lifting bridle is securely fastened, as described, to the KED Pro connect the lifting ring to the retrieval system that will be used for the operation. Refer to your local retrieval guidelines and operational procedures.
3. Ensure all lifting straps are securely fastened and the load is equally shared between all three straps. Each lifting strap must be taut. It is very important that there is no slack or looseness in the straps (Figure 12). Refer to Section 4-2 Shortening the Strap
4. Double check the entire retrieval system and commence the operation as per your local retrieval and operational guidelines.

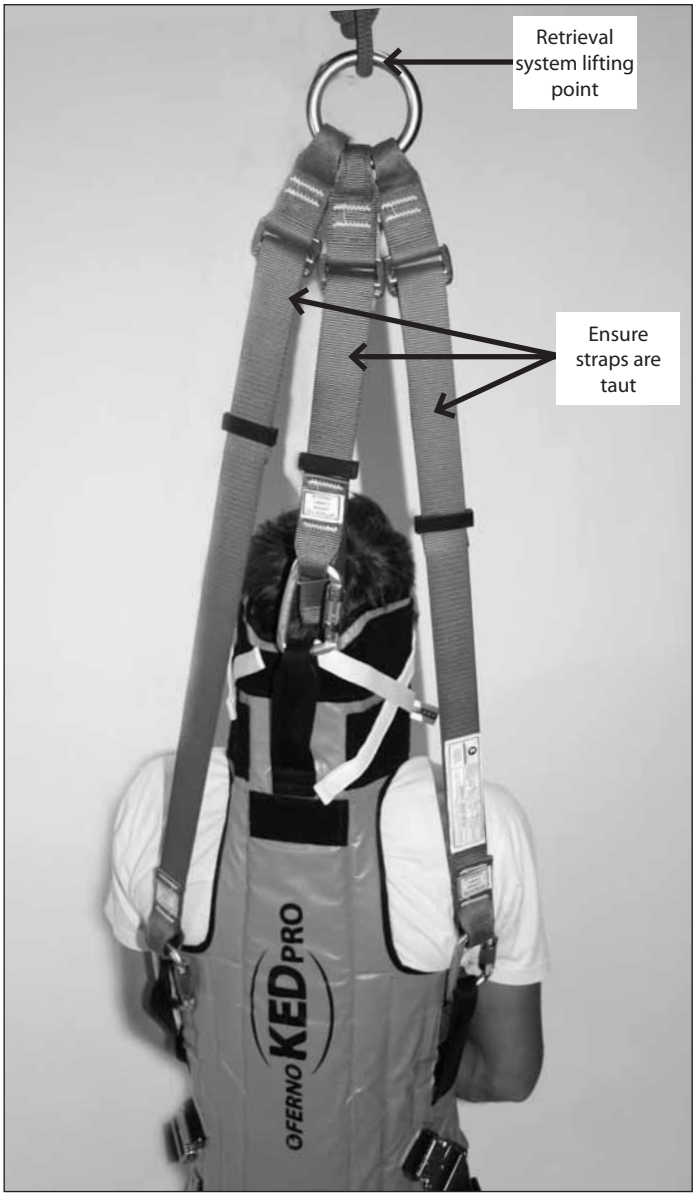

Figure 12

6 - MAINTAINING THE BRIDLE

6.1 Maintenance Schedule

The bridle requires regular maintenance. Set up and follow a maintenance schedule. A form is provided on page 15. The schedule below represents minimum maintenance.

	Each Use	As Needed	Each Month
Disinfecting (this page)	•		
Cleaning (this page)		•	
Inspecting (this page)	•		

When using maintenance products, follow the manufacturers' directions and read the manufacturers' material safety data sheets.

⚠ WARNING

Improper maintenance can cause injury. Maintain the bridle only as described in this manual.

Important

Disinfectants and cleaners containing bleach, phenolics, or iodines can cause damage. Disinfect and clean only with products that do not contain these chemicals.

6.2 Disinfecting and Cleaning the Bridle

Wipe or spray all surfaces of the bridle with disinfectant. Follow disinfectant manufacturer's directions.

Hand wash the bridle in warm water with a mild soap. Rinse in clear water. Use towels to squeeze excess water from the webbing and to wipe excess water from the hardware and karabiners.

Hang the bridle in a warm place to dry. When webbing, hardware, and karabiners are completely dry, lubricate the karabiners as described below.

6.3 Lubricating the Karabiners

Apply a preservative and lubricant such as WD-40 to karabiner hinge pins, latches, springs, and locking sleeves. Wipe off excess lubricant before storage.

Do not get lubricant on to webbing.

6.4 Storing the Bridle

Store the bridle in a dry place, away from direct sunlight.

6.5 Inspecting the Bridle

After each use, check the bridle for the following:

- ☐ Are all components present?
- ☐ Is all webbing in good condition with no cuts or frayed edges?
- ☐ Is webbing stitching in good condition with no frayed or broken threads?
- ☐ Are the adjustment buckles and lift ring true to their original forms and free of cracks, deep scratches, and gouges?
- ☐ Do moving parts of the adjustment buckles move smoothly?
- ☐ Are the karabiners true to their original form?
- ☐ Are the karabiners free of cracks, deep scratches, and gouges? (Check to make sure that what appears to be a scratch is not actually a crack.)
- ☐ Are karabiner hinge pins securely in place and do the karabiners open and close properly?
- ☐ Do the karabiner locking sleeves turn smoothly and latch the gates securely?

If inspection shows damage or excessive wear, remove the bridle from service and replace it with a new bridle.

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7 - LIMITED WARRANTY

Limited Warranty Summary

Ferno-Washington, Inc. (Ferno), warrants the products we manufacture to be free from defects in material and workmanship for one year except as follows:

(A) Soft goods (webbing, vinyl, fabric, foam, etc.) are warranted for 90 days.

This limited warranty applies when you use and care for the product properly. If the product is not used and cared for properly, the warranty is void. The warranty period begins the day the product is shipped from Ferno or the day you receive it if you have proof of the delivery date. Shipping charges are not covered by the limited warranty. We are not liable for shipping damages or damages sustained through using the product.

Limited Warranty Obligation

If a product or part is proven to be defective, Ferno will repair or replace it. At our option, we will refund the product's purchase price. The purchaser accepts these terms in lieu of all damages.

This is a summary of the limited warranty. The actual terms and conditions of the limited warranty, and the limitations of liability and disclaimers, are available upon request by calling Customer Relations.

8 - FERNO CUSTOMER RELATIONS

Customer relations and product support are important aspects of each Ferno product.

In the U.S.A. and Canada, for assistance with the bridle please contact Ferno Customer Relations, below:

Telephone	1.800.733.3766
Telephone	1.937.382.1451
Fax	1.937.382.1191
Internet	www.ferno.com

Outside the U.S.A. and Canada, for assistance with the bridle please contact your Ferno distributor, or Ferno Customer Relations as listed below:

Australia (Toll Free)	1800 804 647
Telephone (Worldwide)	1.937.382.1451
Fax (Outside U.S.A.)	1.937.382.6569
Internet	www.ferno.com

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TRAINING RECORD		
Date	Name	Training Method

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MAINTENANCE RECORD		
Date	Maintenance Performed	By